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# Examination of Some Important Posttraumatic Adaptation Predictors of War Veterans Who Were Seeking Treatment at Psychiatric Clinic, University Clinical Center in Sarajevo

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**ORIGINAL PAPER**

Summary

**Background:** Recent research studies aim at the examination of predictors of posttraumatic adaptation of war veterans. **General aim** of our research is an examination of predictors of posttraumatic adaptation of war veterans, who actively participated in combat situations. **Subjects and Methods:** Research was conducted on 100 male participants, war veterans who were seeking treatment at the Psychiatric Clinic at the University Clinical Center in Sarajevo. All participants have experienced the combat related traumatic events during the war. Research was based on interviewing and test administration for each participant, using the following instruments: Sociodemographic Questionnaire, List of stresful events, Brief symptom inventory; Manchester Quality of Life and Impact of Events Scale. **Results:** Results of study indicate a high presence of war traumatization in our sample and high subjective distress index among examinees. Our results, also indicate the moderate rate of symptoms of PTSD and the presence of general psychopathology was moderate. Average perceived quality of life was in the category of being "relatively unsatisfied". Effects of factors, frequency of experienced traumatic events and general psychiatric treatment were statistically significant on all dependant factors. PTSD symptoms, presence of General Psychopathology and Quality of Life, in addition to the predictors of perceived personal support by others, were statistically significant on dependant factors . Quality of life and general psychopathology were not statistically significant on dependant variables regarding the presence of PTSD symptoms. **Conclusion:** Results of our research indicate a high level of traumatization in our sample, but relatively moderate presence of PTSD symptoms and general psychopathology. Participants reported relative dissatisfaction with different aspects of life. Statistically significant predictors in posttraumatic adaptation were: the level of traumatization and help with a general psychiatric treatment. Help of close persons regarding dependant factors, regarding PTSD symptoms, were not statistically significant, but were significant on Quality of life and presence of general psychopathology. Results of this research are relevant in understanding, as to which aspects of posttraumatic adaptation contribute to a better and more distinctive rehabilitation of war veterans, to estimate the need for clinical services and to make other policy recommendations for these populations.

**Key words: War veterans, Predictors of posttraumatic adaptation.**

## 1. INTRODUCTION

The veterans of war have survived series of extreme traumatic events due to man made disaster, those traumas were multiple and the exposure to traumatic events was continuous and prolonged. In other words; they survived severe politraumatization. During the war permanent combat stress frequently led to better adjustment to the situation. In the aftermath of the war, after the cessation of combat activities, most of the veterans have subsequently been exposed to secondary traumatization due to societal rejection and absence of deserved compensation from the authorities of the state; unemployment and frequently severe socioeconomic situation in which they are left on their own. Post traumatic environment plays a very important role in the prevention and protection from chronic stress disorders. The interviews with the veterans of war frequently reveal not only chronic PTSD but also the presence of progressively deteriorating adjustment disorder. Permanent hopelessness and lack of the sense of future are also frequently encountered, as well as the co morbid depressive disorder(1). Th most military personnel returning from recent deployments will readjust successfully to life in the United States, a significant minority will exhibit PTSD or some other psychiatric disorder. Practitioners should routinely inquire about war-zone trauma and associated symptoms when conducting psychiatric assessments. Treatment should be initiated as soon as possible, not only to ameliorate PTSD symptoms but also to forestall the later

development of comorbid psychiatric and/or medical disorders and to prevent interpersonal or vocational functional impairment (2). More than one-third of the veterans had sought psychological help in the year after their return, but the majority required only one or two visits to resolve their concerns, said the team at Walter Reed Army Institute of Research that conducted the study(3). It has been widely accepted that war veterans need organized help. Lack of social support after war trauma leads to chronification of psychological consequences of trauma. Characteristics of the post-traumatic environment have also been shown to be related to the later development of PTSD. Among Vietnam veterans, low levels of post-military social support and dysfunctional patterns of social interaction have been shown to increase the risk for PTSD (4). Some people with Posttraumatic stress disorder are able to lead productive and fulfilling lives. Others, however, may develop a persistent incapacitating mental illness marked by severe and intolerable symptoms, marital, social, and vocational disability, and extensive use of psychiatric and community services. Social support is a powerful protective factor (5). The protective aspect is influenced by the capacity of an individual to accept or utilize social support when it is made available (6). Acceptance of social support may be especially problematic in PTSD, where symptoms such as avoidance, alienation, and detachment impair the affected individual's ability to benefit from available marital, family, and social support. Effective evidence-based psychotherapeutic and pharmacological treatments are available. Treatment should be initiated as soon as possible, not only to ameliorate PTSD symptoms but also to forestall the later development of comorbid psychiatric and/or medical disorders and to prevent interpersonal or vocational functional impairment. If evidence-based practices are utilized, complete remission can be achieved in 30%—50% of cases of PTSD, and partial improvement can be expected with most patients. We can all look forward to future breakthroughs that will improve our capacity to help people with PTSD(2, 7).

The aim of research

Research was to determine which predictors included in study (frequency of experienced traumatic events, perceived social support, professional help of psychiatrist have potential effect, as moderators, on dependant variables (trauma outcomes such as PTSD symptoms, other psychopathological response and quality of life, regarding the fact that addaptation to trauma and types of outcomes are commonly related to effect of such moderators.

## 2. SUBJECTS AND METHODS

Research was conducted on 100 male participants, war veterans, whose age range was between 36 to 65 years. Regarding number of participants we decided that this number of participants would be sufficient enough to later enable researchers for further inferential statistics analysis regarding number of independant factors (predictors) and outcomes (dependant variables)(8). Inclusive criteria for participation in study were war veterans, age range between 37 to 65, absence of psychiatric anamnesis except of trauma related dissorders, intellectual subnormality and psychiatric dissorders caused by brain or other organic damage. All subjects were seeking treatment at Psychiatric Clinic reletated of war trauma dissorders, all of them signed informed consent before entering into this study which conducted at the Psychiatric Clinic. Procedure of research was based on interviewing and test administration for each client. Questionnaire administration had been performed once for each participant. We decided to use below mentioned assessment scales because they were already well known to us and widely used in many other similar researches worldwide. The other reason for choosing this particular assessment scales was their well known and respectable psychometric features such as their validity and reliability. Yet another reason was the fact that theese particular assessment scales adequatly measure variables that were in focus of this research. The subjects were assessed using the following instruments: 1.Sociodemographic Questionnaire designed by the authors for registering the social and demographic characteristics of the subjects (age, nationality, employment, educational level, marital status, legal status, accomodation). 2.List of stressfull events (Wolfe, 1996) contains 25 questions and we used it to register which traumatic events related to war clients experienced, and what was their distress level regarding each traumatic event. It is Likert type scale with distress levels such as 1 – no distress at all, 2 – mild presence of distress, 3 – moderate presence of distress, 4 –high presence of distress(9). 3.BSI 53 Brief simptom inventory (Derogatis, 1993) is a scale which contains 53 questions and covers different psychopathological categories (psychoticism, somatisation, paranoid ideation, anxiety, depression, phobic symptoms, interpersonal sensitivity, obsessive – compulsive symptoms, hostility). It is Likert type scale with symptom assessment degrees such as 0 – symptom is not observed, 1 – mild presence of symptom, 2 – moderate presence of symptom, 3 –high presence of symptom, 4 – very high presence of symptom (10). 4. MANSA Manchester Quality of Life Scale (Priebe, 1999) as a self-report scale. It contains 16 questions by which client estimates level of his satisfaction with different aspects of life. It is Likert type scale with quality of life assessment degrees such as 1 – could not be any worse, 2 – mainly unsatisfied, 3 – mildly unsatisfied, 4 – neather unsatisfied nor satisfied, 5 – mildly satisfied, 6 – mainly satisfied and 7 – culd not be any better(11). 5. IES-R Impact of Events Scale (Weiss and Marmar, 1997) is scale which contains 22 questions with aim to assess presence of posttraumatic reactions such as intrusive, avoidance and hyperarousal symptoms. It is Likert type scale with symptom assessment degrees such as 0 – symptom is not observed, 1 – low presence of symptom, 2 – moderate presence of symptom, 3 –high presence of symptom, 4 – very high presence of symptom.(12)

6. Structured questions revealing weather participant had received any psychological or psychiatric professional help, used psychopharmacs and received personal support or help provided by important persons (such as family members or friends).

## 3. RESULTS

Sociodemographyc characteristics of sample

| Traumatic events experienced during the war | Frequency | Percent | Subjective distress Mean |
|---|---|---|---|
| Serious accident | 6 | 6 | 3,90 |
| Natural disaster | 0 | 0 | 0 |
| Nonsexual assault by known person | 6 | 6 | 3,9 |
| Nonsexual assault by unknown person | 12 | 12 | 3,9 |
| Sexual assault by known person | 0 | 0 | 0 |
| Sexual assault by unknown person | 1 | 1 | 4 |
| Inprisonment | 10 | 10 | 4 |
| Serious illness | 10 | 10 | 3,89 |
| Sudden death of close person | 8 | 8 | 3,76 |
| Lack of food and water | 86 | 86 | 3,71 |
| Lack of medical care when ill | 5 | 5 | 4 |
| Lack of shelter | 100 | 100 | 3,96 |
| Ethnic cleansing | 23 | 23 | 4 |
| Combat situation | 100 | 100 | 3,92 |
| Granade or shell explosion | 100 | 100 | 3,92 |
| Land mine explosion | 76 | 76 | 4 |
| Under siege | 100 | 100 | 3,96 |
| Serious wound or injury | 15 | 15 | 3,94 |
| Witnessed a murder | 66 | 66 | 4 |
| Learned about assault of dear person | 82 | 82 | 3,99 |
| Learned about death of dear person | 71 | 71 | 3,95 |
| Learned about dear person being taken or kidnapped | 34 | 34 | 3,76 |
| Torture | 10 | 10 | 4 |
| Had been lost | 11 | 11 | 3,9 |
| Had been kidnaped | 4 | 4 | 4 |

Table 1. List of stresfull traumatic events experienced in war and subjective distress of participants regarding each experienced traumatic event.

| Variables | Mean | Standard deviation |
|---|---|---|
| Intrusion symptoms | 2,20 | 1,10 |
| Avoidance symptoms | 2,16 | 1,14 |
| Hyperarousal symptoms | 2,10 | 1,18 |
| General psychopatology | 2,09 | 0,78 |
| Quality of life | 2,90 | 0,86 |
| Somatization symptoms | 2,10 | 0,67 |
| Obsessive – compulsive symptoms | 1,99 | 0,42 |
| Interpersonal sensitivity symptoms | 2,18 | 0,81 |
| Depressive symptoms | 2,03 | 0,85 |
| Anxiety symptoms | 2,14 | 0,88 |
| Hostility symptoms | 1,66 | 0,78 |
| Phobic symptoms | 1,89 | 0,66 |
| Paranoid ideation symptoms | 0,63 | 0,50 |
| Psychotic symptoms | 0,66 | 0,52 |
| List of stressors | 8,80 | 3,32 |

Table 2. Descriptive statistics for main variables *Description of all assessment scales and its values were given in section: subjects and methods

In our sample there were 100 male participants. Majority of them were Bosniaks 79%(79); Bosnian Serbs 8% (8); Bosnian Croats 7 % (7); Bosnians 3% (3); Macedonians 1% (1); Montenegrans 2%(2). All participants actively participated in combat operations. Regarding their legal status: 87% were domestic citizens of Sarajevo canton, while there were 8% of returnees and 5% of internaly displaced. Majority of participants had secondary education level 58%, 30% of them had primary level of education, and 12 % had university degree. 40% of participants were employed, 31% retired and 29 % were unemployed. Married participants were majority 72%, 12 % were single, 9 % were divorced and widowed 7 %. Regarding age of participants majority of them were in two middle subgroups: 38% in range from 41 to 50 years of age group, and 30% in range from 51 to 60 years of age group, 19% of them were in range from 36 to 40 years of age and 13% were in range from 61 to 65 years of age group.

Traumatic events experienced during the war There was the high presence of war traumatization in our sample. The most frequently experienced traumatic events were combat situation (100%); being under siege (100%), Granade or shell explosion 100% and experienced lack of shelter (100%), informations about that their dear persons had been assaulted (82%) or murdered (71%), Lack of food and water 86% Frequency mean for traumatic events in our sample was 8,80 which meant that each participant in average experienced 8 different traumatic events during the war. Subjective distress mean was 3,90 indicates that participants had very high level of perceived distress for each traumatic event. Table 1.

Descriptive Statistics for main variables

The results indicates that in average PTSD simptoms (intrusive, avoidance and hyperarrousal) were in category moderate presence. General psychopathology and nine clusters of symptoms were in category of moderate presence. Average perceived quality of life was in category relatively unsatisfied. Frequency mean for traumatic events in our sample was 8,80 (Table 2).

The effect of factors professional help of psychiatrist and perceived personal support by others, and mediator variable (total frequency of experienced traumatic events) on dependant variables (symptoms of PTSP, intensity of presence of general psychopatology and quality of life).

Table indicates that effect of factor: professional help of psychiatrist is statistically significant on criteriums or dependant variables: PTSD symptoms (intrusions $p < 0.05$; avoidance $p < 0.05$; hyperarousal $p < 0.05$); Presence of general psychopathology ($p < 0.05$) and Quality of life ($p < 0.05$). Table indicates the effects of the factors: perceived personal support by others is statistically significant on criteriums or dependant variables: Presence of general psychopathology ($p < 0.05$) and Quality of life ($p < 0.05$), but is not statistically significant for dependant variables: PTSD symptoms (intrusions $p > 0.05$; avoidance $p > 0.05$; hyperarousal $p > 0.05$). Table 3.

## 4. DISCUSSION

Results of the study examination of some important postraumatic adjustments predictors of war veterans indicate high frequency of experienced traumatic events, and moderate level of PTSD symptoms and general psychopathology, also indicate relatively mildly unsatisfied estimated quality of life, which all together indicates relatively successfull posttraumatic adaptation in our sample. Such results indicate relatively usefull posttrauma factors (psychiatric help, social support and support of social surrounding). According to this study of posttraumatic

adaptation the most significant predictor of posttraumatic adaptation for dependant variables: presence of PTSD symptoms, general psychopathology and quality of life is frequency of traumatic events. In our sample the frequency of traumatic events were very high. Accoding the very high frequency of traumatic events the posttraumatic adaptation in our sample are relatively successfull. Despite the fact that frequency of traumatic events was high as well as the high level of subjective distress, it did not highly affect the PTSD level, level of general psychopathology and quality of life. This by itself indicates relatively good posttraumatic adaptation. Psychiatric help was statistically significant regarding reducing of general psychopathology, PTSD symptoms and improving quality of life. Help of close persons (social support was statistically significant regarding reducing general psychopathology and in improving quality of life. Therefore, this research proves important role of psychiatric help in posttraumatic adaptation which is in accordance with many other studies (13,14 ). Recent studies aimed at examination of importance of social support towards traumatized war veterans are also in accordance with results of this study (15,16).

| Source of variability (factor) | Dependant variable | df | Sum of squares | F | Level of significance |
|---|---|---|---|---|---|
| Total frequency (number) of experienced traumatic event | Intrusive symptoms | 1 | 34,83 | 29,41 | p<0,01** |
| | Symptoms of denial | 1 | 27,75 | 28,57 | p<0,01** |
| | Symptoms of hyperarousal | 1 | 33,51 | 29,61 | p<0,01** |
| | Presence of general psychopathology | 1 | 12,64 | 42,76 | p<0,01** |
| | Quality of life | 1 | 16,69 | 18,01 | p<0,01** |
| General psychiatric help (pharmacotherapy, individual psychotherapy, group psychotherapy, psychological counceling) | Intrusive symptoms | 1 | 4,21 | 4,75 | p<0,05* |
| | Symptoms of denial | 1 | 2,74 | 3,04 | p<0,05* |
| | Symptoms of hyperarousal | 1 | 2,49 | 3,05 | p<0,05* |
| | Presence of general psychopathology | 1 | 0,48 | 1,96 | p<0,05* |
| | Quality of life | 1 | 0,28 | 0,41 | p<0,05* |
| Perceived personal support by others (help in and arround house, help with children, relations with close persons and withuin veteran organisations) | Intrusive symptoms | 1 | 0,02 | 0,02 | p>0,05 |
| | Symptoms of denial | 1 | 0,04 | 0,07 | p>0,05 |
| | Symptoms of hyperarousal | 1 | 1,52 | 1,62 | P>0,05 |
| | Presence of general psychopathology | 1 | 1,46 | 7,74 | p<0,05* |
| | Quality of life | 1 | 3,48 | 4,44 | p<0,05* |

Table 3. Model of multivariate analysis: Effect of factors (General psychiatric help and perceived personal support by others, mediator variable (total frequency of experienced traumatic events) on dependant variables (symptoms of PTSP, intensity of presence of general psychopatology and quality of life).

## 5. CONCLUSION

Results of research indicate that war veterans who were seeking treatment at Psychiatric Clinic University Clinical Center Sarajevo experienced many various traumatic events durring the war, and these traumatic events for them had been followed by very high level of distress. However, we can conclude that our examiness have shown relatively successfull posttraumatic adaptation regarding the fact that their reports on psychopathology scale were relatively moderate and their reports on quality of life were mildly unsatisfied. Furtheron, we can conclude that in process of posttraumatic adaptation important roles in terms of positive adaptation had factors of psychiatric professional help and help of close persons. Results of this study have scientific and practical importance regarding opportunity to get better insight in which aspects of posttraumatic adaptation have higher and better influence on general rehabilitation of traumatized war veterans and to estimate the need for clinical services, and to make other policy recommendations for these population.

## REFERENCES


1. Kučukalić A, Bravo-Mehmedbašić A, Džubur-Kulenović A. Specific differences in trauma related symptoms between war veterans and civilian population . Psychiatria danubina. 2004; 16(1-2): 61-67.
2. Friedman MJ. Posttraumatic Stress Disorder Among Military Returnees From Afghanistan and Iraq Am J Psychiatry. 2006; 163: 586-593.
3. Rui Chong J, Maugh TH. Study Details Mental Health of War Veterans Published 2006 by the Los Angeles Times 2006. http://www.commondreams.org/headlines06/0301-06.htm.
4. Gawande A. Casualties of war: military care for the wounded from Iraq and Afghanistan. N Engl J Med. 2004; 351: 2471-2475.
5. Brewin CR, Andrews B, Valentine JD: Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. J Consult Clin Psychol. 2000; 68: 748-766.
6. Benight C, Bandura, A. Social cognitive theory of posttraumatic recovery: the role of perceived self-efficacy. Behav Res Ther. 2004; 42: 1129-1148.
7. Friedman MJ. Toward rational pharmacotherapy for posttraumatic stress disorder. Am J Psychiatry. 1988; 145: 281-285.
8. Lowry R. 2002. Inferential statistics. http: / faculty.vassar.edu/lowry/ch14ptl.html.
9. Wolfe JW, Kimerling R, Brown PJ, Chrestman KR & Levin K. Psychometric review of The Life Stressor Checklist-Revised. In: Stamm BH (ed): Measurement of Stress, Trauma, and Adaptation. Lutherville, MD: Sidran Press, 1996.
10. Derogatis LR. Brief Symptom Inventory (BSI): Administration,scoring and procedures manual (3rd ed.). Minneapolis: NCS Pearson, Inc. 1993.
11. Priebe S, Huxley P. & Knight S: Application and results of the Manchester Short Assessment of Quality of Life Scale (MANSA). International Journal of Social Psychiatry. 1999; 45: 7-12,
12. Weiss DS & Marmar CR. The Impact of Event Scale Revised in Assessing Psychological Trauma and PTSD–A Practitioners Handbook, 1st ed. Edited by Wilson JP & Keane TM. New York, Guilford Press, 1997.
13. Schlenger WE, Kulka RA, Fairbank JA, Hough RL, Jordan BK, Marmar CR, Weiss DS. The prevalence of post-traumatic stress disorder in the Vietnam generation: a multimethod, multisource assessment of psychiatric disorder. J Trauma Stress. 1992; 5:333-363.
14. Friedman MJ, Davidson JRT, Mellman TA, Southwick SM. Pharmacotherapy, in Effective Treatments for PTSD: Practice Guidelines From the International Society for Traumatic Stress Studies. Edited by Foa EB, Keane TM, Friedman MJ. New York, Guilford, 2000: 84-105.
15. Shalev AY, Friedman MJ, Foa EB, Keane TM. Integration and summary, in Effective Treatments for PTSD: Practice Guidelines From the International Society for Traumatic Stress Studies. Edited by Foa EB, Keane TM, Friedman MJ. New York, Guilford, 2000: 359-379.
16. Riggs DS. Marital and family therapy, in Effective Treatments for PTSD: Practice Guidelines From the International Society for Traumatic Stress Studies. Edited by Foa EB, Keane TM, Friedman MJ. New York, Guilford, 2000: 280-301.


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